Appendix C:

Glossary

ACUTE TOXICITY
Any toxic effect that is produced within a short period of time, generally 96 hours or less. Although the effect most frequently considered is mortality, the end result of an acute effect could be any harmful biological effect.

AEROBIC
Living, active or occurring only in the presence of oxygen. For example, soil microorganisms which degrade sewage effluent from septic systems need oxygen in order to function.

ALGAE
Aquatic, nonflowering plants that lack roots and use light energy to convert carbon dioxide and inorganic nutrients such as nitrogen and phosphorus into organic matter by photosynthesis. Common algae include dinoflagellates, diatoms, seaweeds and kelp. An algal bloom can occur when excessive nutrient levels and other physical and chemical conditions enable the algae to reproduce rapidly.

AMBIENT MONITORING
Monitoring that is done to determine existing environmental conditions, contaminant levels, rates, or species in the environment, against which future conditions can be compared. This type of monitoring occurs in waters not located in close proximity to direct discharges of pollutants.

ANADROMOUS FISH
Species, such as salmon, which hatch in fresh water, spend a large part of their lives in the ocean, and return to freshwater rivers and streams to reproduce.

ANTHROPOGENIC
Effects or processes that are derived from human activity, as opposed to natural effects or processes that occur in the environment without human intervention.

AQUACULTURE
The controlled cultivation and harvest of aquatic plants or animals (e.g., edible marine algae, clams, oysters and salmon).

AQUIFER
The underground layer of rock or soil in which ground water resides. Aquifers are replenished or recharged by surface water percolating through soil. Wells are drilled into aquifers to extract water for human use.

AROMATIC
A chemical substance characterized by the presence of at least one benzene ring. These substances may have a strong smell and are often persistent in the environment due to the stability of the benzene ring.

BASELINE STUDY
A study that documents the existing state of an environment to serve as a baseline against which future changes are measured.

BENTHIC ORGANISMS
Organisms that live in or on the bottom of a body of water.

BEST MANAGEMENT PRACTICE (BMP)
A method, activity, maintenance procedure, or other management practice for reducing the amount of pollution entering a water body. The term originated from the rules and regulations developed pursuant to Section 208 of the federal Clean Water Act (40 CFR 130).

BIENNIUM
The Washington State Biennium. WA adopts a two-year budget, which runs from July 1 of odd-numbered years to June 30 of the next odd-numbered year.

BIOACCUMULATION
The process by which a contaminant accumulates in the tissues of an organism. For example, certain chemicals in food eaten by a fish tend to accumulate in its liver and other tissues.

BIOASSAY
A test procedure that measures the response of living plants, animals or tissues to potential contaminants. For example, marine worms have been exposed to the sediments of Puget Sound, and their responses have been used to determine areas in the Sound where the sediments may be harmful to life.

BIOCHEMICAL OXYGEN DEMAND (BOD)
The quantity of oxygen-demanding materials present in a sample as measured by a specific test. A major objective of conventional wastewater treatment is to reduce the biochemical oxygen demand so that the oxygen content of the water body will not be significantly reduced. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

BIODEGRADATION
The conversion of organic compounds into simpler compounds through biochemical activity. Toxic compounds can sometimes be converted into nontoxic compounds through biodegradation. In some cases complex compounds are first converted into intermediate substances that can be more toxic than the original substance.

BIOMAGNIFICATION
The process by which concentrations of contaminants increase (magnify) as they pass up the food web such that each animal in the food web has higher tissue concentrations than did its food. For example, concentrations of certain contaminants can increase as they are passed from plankton to herring to salmon to seals.

BIOTA
The animals, plants and microbes that live in a particular location or region.

CANDIDATE SPECIES
A species proposed to be listed as threatened or endangered under the Endangered Species Act by the U.S. Secretary of the Interior.

CARCINOGENIC
Capable of causing cancer.

CENTENNIAL CLEAN WATER FUND (CCWF) also known as the **WATER QUALITY ACCOUNT**
In 1986, legislation was passed creating the Water Quality Account in the state treasury (RCW 70.146). The purpose of the account is to provide financing of water pollution-control facilities and activities. The account receives revenue from a tax on tobacco products. The Department of Ecology, in adopting rules for administration of the account, has named it the Centennial Clean Water Fund.

CERTIFIED SHELLFISH BED
An area where commercial shellfish harvesting is approved by the Washington Department of and Health (DOH), based on measurements of fecal coliform bacteria in the overlying waters. Fecal coliform bacteria are used as an indicator of pathogens that could pose a human-health risk.

CHRONIC TOXICITY
Any toxic effect on an organism that results after exposure of long duration (often 1/10th of the life span or more). The end result of a chronic effect can be death, although the usual effects are sublethal (e.g., inhibited reproduction or growth). These sublethal effects may be reflected by changes in the productivity and population structure of the community.

CLEAN WATER ACT (CWA)
Also known as the federal Water Pollution Control Act (33 U.S.C. 1251 et seq.).

CLEANUP ACTIVITIES
Actions taken by a public agency or a private party to correct an environmental problem. Activities generally consist of the treatment or removal from the environment of contaminants introduced by past practices (for example, capping part of a public park contaminated with carcinogenic compounds or digging up and incinerating soil contaminated with dioxin).

CODE OF FEDERAL REGULATIONS (CFR)
The compilation of federal regulations adopted by federal agencies through the rule-making process. For example, pretreatment regulations are found in 40 CFR 403.

COLIFORM BACTERIA
A type of bacteria that is coil or helix shaped. Fecal coliform bacteria are those coliform bacteria that are found in the intestinal tracts of mammals. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated waste water and/or the presence of animal feces. These organisms may also indicate the presence of pathogens that are harmful to humans. High numbers of fecal coliform bacteria therefore

limit beneficial uses of water such as swimming and shellfish harvesting.

COMBINED SEWER OVERFLOW (CSO)
A pipe that discharges untreated waste water during storms from a sewer system that carries both sanitary waste water and storm water. The overflow occurs because the system does not have the capacity to transport, store or treat the increased flow caused by stormwater runoff.

COMBINED SEWER SYSTEM
A wastewater collection and treatment system where domestic and industrial waste water is combined with storm runoff. Although such a system does provide treatment of storm water, in practice the systems may not be able to handle major storm flows. As a result, untreated discharges from combined sewer overflows may occur.

CONFINED DISPOSAL
A dispositional method that isolates dredged material from the environment. Confined disposal may be in aquatic, nearshore, or upland environments.

CONTAMINANT
A substance that is not naturally present in the environment or is present in amounts that can, in sufficient concentration, adversely affect the environment.

CONVENTIONAL POLLUTANT
Conventional pollutants as specified under the Clean Water Act are total suspended solids, fecal coliform bacteria, biochemical oxygen demand, pH, and oil and grease. Today a large number of nonconventional and toxic contaminants are of concern in addition to the conventional pollutants.

CRITICAL HABITAT
The minimum habitat that an endangered species needs to ensure its survival.

CUMULATIVE EFFECTS
The combined environmental impacts that accrue over time and space from a series of similar or related individual actions, contaminants, or projects. Although each action may seem to have a negligible effect, the combined effect can be severe.

DETENTION
The process of collecting and holding back storm water for delayed release to receiving waters.

DISCHARGE, DIRECT OR INDIRECT
The release of waste water or contaminants to the environment. A direct discharge of waste water flows directly into surface waters while an indirect discharge of waste water enters a sewer system.

DISINFECTION
The destruction of infectious agents such as bacteria or viruses. Most wastewater treatment plants use chlorine or bromine for disinfection.

DISPOSAL
Methods by which unwanted materials are relocated, contained treated, or processed. Unless contaminants are converted to less harmful forms or removed from the material before disposal, they may be released again into the environment.

DISSOLVED OXYGEN
Oxygen that is present (dissolved) in water and therefore available for fish and other aquatic animals to use. If the amount of dissolved oxygen in the water is too low, then aquatic animals may die. Waste water and naturally occurring organic matter contain oxygen-demanding substances that consume dissolved oxygen.

DOMESTIC WASTEWATER (SEWAGE)
Human-generated waste water that flows from homes, businesses and industries.

DREDGING
Any physical digging into the bottom sediment of a water body. Dredging can be done with mechanical or hydraulic machines, and it changes the shape and form of the bottom. Dredging is routinely done in many parts of Puget Sound in order to maintain navigation channels that would otherwise fill with sediment and block ship passage.

ECOSYSTEM
A community of living organisms interacting with one another and with their physical environment, such as a rain forest, pond or estuary. Damage to any part of a complex system, such as Puget Sound, may affect the whole. A system such as Puget Sound can also be thought of as the sum of many interconnected ecosystems such as the rivers, wetlands, and bays. Ecosystem is thus a concept applied to communities of different scale, signifying the interrelationships that must be considered.

EFFLUENT
The liquid that flows out of a facility or household into a water body or sewer system. For example, the treated liquid discharged by a wastewater treatment plant is the plant's effluent.

ENDANGERED SPECIES
A plant or animal species or subspecies that is determined by the Endangered Species Act listing process to be in danger of extinction

ENDANGERED SPECIES ACT (ESA)
A federal law that governs actions that may affect a plant or animal species thought to be in danger of extinction throughout all or a significant portion of its range.

EVOLUTIONARILY SIGNIFICANT UNIT (ESU)
A term that describes a distinct population segment of a species or subspecies. A population within an ESU is both reproductively isolated and genetically unique.

ENVIRONMENTAL IMPACT STATEMENT (EIS)
A document that discusses the likely significant impacts of a development project or a planning proposal, ways to lessen the impacts, and alternatives to the project or proposal. EISs are required by the national and Washington state environmental policy acts.

EROSION
Wearing away of rock or soil by the gradual detachment of soil or rock fragments by water, wind, ice and other mechanical and chemical forces.

ESTUARY
A coastal water body where ocean water is diluted by out-flowing fresh water.

FECAL COLIFORM (*see* **COLIFORM BACTERIA)**

FECES
Waste excreted from animals.

FOREST PRACTICE
Any activity conducted on or directly pertaining to forestland related to growing, harvesting or processing timber. These activities include but are not limited to: road and trail construction, final and intermediate harvesting, precommercial thinning, reforestation, fertilization, prevention and suppression of disease and insects, salvage of trees, and brush control. Forest practices are subject to regulation by the Washington Department of Natural Resources.

FUNGICIDE
A substance that destroys or inhibits growth of fungus.

GEOGRAPHIC INFORMATION SYSTEM (GIS)
A computer system that allows the display and analysis of geographic information. A GIS could, for example, display wetland boundaries on a city map.

GROUNDFISH
Fish (also known as bottomfish) that live on or near the bottom of water bodies, for example, English sole.

GROUND WATER
Underground water supplies stored in aquifers. Ground water is created by rain that soaks into the ground and flows down until it is collected at a point where the ground is not permeable. Groundwater then usually flows laterally toward a river, lake or the ocean. Wells tap the ground water for use. (See AQUIFER)

GROWTH MANAGEMENT ACT
The state law (RCW 36.70A) that directs local governments to adopt revised comprehensive land-use plans and development regulations. Local governments can incorporate many water quality and habitat protections into their growth management program.

HABITAT
The specific area or environment in which a particular type of plant or animal lives. An organism's habitat must provide all the basic requirements for life and should be free of harmful contaminants. Typical Puget Sound habitats include beaches, marshes, rocky shores, the bottom sediments, intertidal mudflats, and the water itself.

HABITAT CONSERVATION PLAN (HCP)
An environmental planning document that outlines how critical habitat for a species listed as threatened or endangered under the Endangered Species Act will be protected and/or improved, usually as part of an incidental takings mitigation plan.

HAZARDOUS WASTE
Any solid, liquid or gaseous substance which, because of its source or measurable characteristics, is classified under state or federal law as hazardous and is subject to special handling, shipping, storage and disposal requirements. Washington state law identifies two categories, dangerous and extremely hazardous. The latter category is more hazardous and requires greater precautions.

HERBICIDE
A substance used to destroy or inhibit growth of vegetation.

HOLDING TANK
An enclosed container used as part of a sewage disposal system on a boat. The tank is used to temporarily store sewage for later pumpout at a marina pumpout facility.

HUMAN-HEALTH RISK
The risk or likelihood that human health will be adversely affected. Estimating health risks is a complex and inexact practice.

HYDRAULIC PROJECT APPROVAL (HPA)
Under the Hydraulic Code Rules, approval is required from Washington State Department of Fish and Wildlife for certain activities in state waters that support fish life. A project approval is required for activities affecting state waters such as certain forest practices; culvert construction; bridge, pier, and piling construction; bulkheads; boat launches; dredging; etc.

HYDROCARBON
An organic compound composed of carbon and hydrogen; for example, petroleum compounds.

HYDROLOGIC CYCLE
The continual cycling of water between the land, the sea and the atmosphere through evaporation, condensation, precipitation, absorption into the soil, and stream runoff.

IMPERVIOUS SURFACE
A surface that cannot be easily penetrated. For instance, rain does not readily penetrate asphalt or concrete pavement.

INCIDENTAL TAKE
Harm that may come to a listed species indirectly, through acts not intended to maliciously or purposely harm the species.

INSECTICIDE
A substance, usually a chemical, that is used to kill insects.

INTERFERENCE
A contaminant can interfere with the normal sewage treatment plant process by diminishing the efficiency of the treatment process. For example, a toxic chemical can kill the beneficial bacteria in a treatment plant and interfere with the biological treatment process, thus causing the release of excessively contaminated effluent.

INTERTIDAL AREA
The area between high and low tide levels. The alternate wetting and drying of this area makes it a transition between land and water and creates special environmental conditions and habitats.

LAND USE
The way land is developed and used in terms of the types of activities allowed (agriculture, residences, industries, etc.) and the size of buildings and structures permitted. Certain types of pollution problems are often associated with particular land-use practices, such as sedimentation from construction activities.

LEACHATE
Water or other liquid that has washed (leached) from a solid material, such as a layer of soil or debris. Leachate may contain contaminants such as organics or mineral salts. Rainwater that percolates through a sanitary landfill and picks up contaminants is called the leachate from the landfill.

LISTING
The research, determination and publication in the Federal Register of the name and critical habitat (if public knowledge of its critical habitat will not make it more vulnerable to unscrupulous collectors) of a threatened or endangered species

LIVEABOARD
Those using a boat, other than a houseboat, as a primary dwelling.

LOADING
The total amount of material entering a system from all sources.

MARINE SANITATION DEVICE (MSD)
A device installed on a boat to treat or hold sewage. Section 312 of the federal Clean Water Act requires all vessels with installed toilets to have approved MSDs. Federal regulations describe three types of MSDs: Type I and Type II MSDs are treatment devices, while Type III MSDs are holding tanks.

MARSH
A wetland where the dominant vegetation is non-woody plants such as grasses and sedges, as opposed to a swamp where the dominant vegetation is woody plants like trees.

METABOLISM
All chemical processes occurring within an organism, including both synthesis and breakdown of organic materials.

METALS
Metals are elements found in rocks and minerals that are naturally released to the environment by erosion, as well as generated by human activities. Certain metals, such as mercury, lead, nickel, zinc and cadmium, are of environmental concern because they are released to the environment in excessive amounts by human activity. They are generally toxic to life at certain concentrations. Since metals are elements, they do not break down in the

environment over time and can be incorporated into plant and animal tissue.

MICROLAYER, SEA-SURFACE MICROLAYER
The extremely thin (usually estimated as 50 microns) layer at the top of the water. Contamination of this layer is of concern because many contaminants, such as oil, grease, organic toxicants and pathogens, are buoyant in seawater and therefore may concentrate at much higher concentrations in the microlayer than in the water column. The atmospheric deposition of toxicants into the microlayer is also of concern. These contaminant concentrations may pose a danger to fish eggs and other organisms that may come into contact with the water surface.

MICROORGANISMS
Microscopic organisms, (e.g., bacteria, viruses and protozoans) that are not visible to the unaided eye. Some cause diseases in humans, animals and plants; some are important because they are involved in breaking down and stabilizing sewage and solid waste.

MODEL ORDINANCE
A sample ordinance which contains elements and language necessary to achieve a desired regulatory effect.

MONITOR
To systematically and repeatedly measure conditions in order to track changes. For example, dissolved oxygen in a bay might be monitored over a period of several years in order to identify trends in concentration.

MUNICIPAL DISCHARGE
Effluent from a municipal sewage treatment plant.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
A part of the federal Clean Water Act, which requires point-source dischargers to obtain discharge permits. These permits are referred to as NPDES permits and are administered by the Washington Department of Ecology.

NONPOINT SOURCE POLLUTION
Pollution that enters water from dispersed and uncontrolled sources (such as surface runoff) rather than through pipes. Nonpoint sources (e.g., forest practices, agricultural practices, on-site sewage disposal, and recreational boats) may contribute pathogens, suspended solids, and toxicants. While individual sources may seem insignificant, the cumulative effects of nonpoint source pollution can be significant.

NUTRIENTS
Essential chemicals needed by plants or animals for growth. If other physical and chemical conditions are optimal, excessive amounts of nutrients can lead to degradation of water quality by promoting excessive growth, accumulation, and subsequent decay of plants, especially algae. Some nutrients can be toxic to animals at high concentrations.

OXYGEN-DEMANDING MATERIALS
Materials such as food waste and dead plant or animal tissue that use up dissolved oxygen in the water when they are degraded through chemical or biological processes. Biochemical oxygen demand (BOD) is a measure of the amount of oxygen consumed when a substance degrades.

PARALYTIC SHELLFISH POISONING (PSP)
An illness, sometimes fatal to humans and other mammals, caused by a neuro-toxin produced by a type of plankton called Gonyaulax. During certain times of the year and at certain locations, these organisms proliferate in "blooms" (sometimes called red tides) and can be concentrated by clams, mussels, and other bivalves. The nervous system of affected shellfish is unaffected. Consumption of the shellfish can cause acute illness in humans and other mammals.

PARAMETER
A quantifiable or measurable characteristic. For example, height, weight, sex and hair color are all parameters that can be determined for humans. Water quality parameters include temperature, pH, salinity, dissolved oxygen concentration, and many others.

PATHOGEN
An agent such as a virus, bacterium or fungus that can cause diseases in humans. Pathogens can be present in municipal, industrial and nonpoint-source discharges to the Sound.

PELAGIC
Associated with or living in the water column as opposed to the bottom or the shoreline.

PERCOLATE
To pass through a permeable substance. For instance, septic effluent and rainfall percolates through soil.

PERSISTENT
Compounds that are not readily degraded by physical, chemical, or biological processes.

PERSISTENT MARINE DEBRIS (PMD)
Plastic, glass, metal, rags and other refuse accidentally or purposely put into the marine environment.

The plastic component is often referred to as Marine Plastic Debris (MPD). Marine debris can injure or kill marine life and threatens the safety of swimmers, divers and watercraft..

PESTICIDE
A general term used to describe chemical substances that are used to destroy or control pest organisms. Pesticides include herbicides, insecticides, algicides, fungicides, and others. Many of these substances are manufactured and are not naturally found in the environment. Others, such as pyrethrum, are natural toxins which are extracted from plants and animals.

pH
The degree of alkalinity or acidity of a solution. A pH of 7.0 indicates neutral water while a pH of 5.5 is acid. A reading of 8.5 is alkaline or basic. The pH of water influences many of the types of chemical reactions that will occur in it. For instance, a slight decrease in pH may greatly increase the toxicity of substances such as cyanides, sulfides and most metals. A slight increase may greatly increase the toxicity of pollutants such as ammonia.

PHOTOSYNTHESIS
The process by which plants use light energy to make simple sugars and carbohydrates from carbon dioxide and water.

PLANKTON
Small plants (phytoplankton) and animals (zooplankton) that are suspended in the water and either drift with the currents or swim weakly.

POINT SOURCE
A source of pollutants from a single point of conveyance such as a pipe. For example, the discharge pipe from a sewage treatment plant or a factory is a point source.

POLLUTANT
A contaminant that adversely alters the physical, chemical or biological properties of the environment. The term includes pathogens, toxic metals, carcinogens, oxygen-demanding materials, and all other harmful substances. With reference to nonpoint sources, the term is sometimes used to apply to contaminants released in low concentrations from many activities which collectively degrade water quality. As defined in the federal Clean Water Act, pollutant means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into water.

POLYCHLORINATED BIPHENYLS (PCBs)
A group of manufactured chemicals including about 70 different but closely related compounds made up of carbon, hydrogen and chlorine. If released to the environment, they persist for long periods of time and can biomagnify in food webs because they have no natural usage in the food web. PCBs are suspected of causing cancer in humans. PCBs are an example of an organic toxicant.

POLYCYCLIC or POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)
A class of complex organic compounds, some of which are persistent and cancer-causing. These compounds are formed from the combustion of organic material and are ubiquitous in the environment. PAHs are commonly formed by forest fires and by the combustion of gasoline and other petroleum products. They often reach the environment through atmospheric fallout and highway runoff.

PRETREATMENT
The treatment of industrial wastewater to remove contaminants prior to discharge into municipal sewage systems.

PRIMARY TREATMENT
A wastewater treatment method that uses settling, skimming and (usually) chlorination to remove solids, floating materials, and pathogens from waste water. Primary treatment typically removes about 35 percent of the BOD and less than half of the metals and toxic organic substances.

PRIORITY POLLUTANTS
Substances listed by the EPA under the federal Clean Water Act as toxic and having priority for regulatory controls. The list currently includes 12 metals, two inorganic compounds, and a 111 natural and artificial organic compounds (111). The list of priority pollutants includes some substances which are not of immediate concern in Puget Sound, and it does not include all known harmful compounds.

PROTOCOL
A standardized procedure for field collection, laboratory analysis, and/or interpretation of samples. Good protocols improve the quality of data and make data from different sources comparable. The Puget Sound Estuary Program protocols were developed under contract to EPA to standardize

sample collection and analysis within the Sound, allowing for comparability of data and determination of long-term environmental trends.

PUGET SOUND, WATERS OF
As defined in RCW 90.70.005, all salt waters of the state of Washington inside the international boundary line between Washington and British Columbia, and lying east of 123° 24' west longitude (east of Port Angeles).

PUGET SOUND WATER QUALITY ACTION TEAM (ACTION TEAM)
A body representing state and federal agencies and tribal and local governments that is responsible for amending the Puget Sound Management Plan and adopting biennial work plans to implement the management plan. (See RCW 90.71)

***PUGET SOUND WATER QUALITY WORK PLAN* (WORK PLAN)**
Biennial work plans that define specific actions that government entities will take to protect and restore Puget Sound each state biennium. The work plans are short-term steps towards implementing the long-range management plan. (See RCW 90.71)

THE PUGET SOUND COUNCIL
A body representing certain groups that have an interest in Puget Sound, including shellfish growers, agriculture, business, cities, counties, tribal governments, the environmental community and the legislature. that advises the Action Team on developing the management plan, coordinates efforts to implement the management plan and the work plan, and tracks plan implementation. (See RCW 90.71)

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)
The federal law that classifies and regulates solid and hazardous waste.

REVISED CODE OF WASHINGTON (RCW)
The compilation of the laws of the state of Washington published by the Statute Law Committee. For example, the law that created the Puget Sound Water Quality Action Team is Chapter 90.71 RCW.

RIPARIAN HABITAT
Riparian ecosystems include the transitional areas between aquatic and terrestrial environments and contains all of the environmental elements that directly contribute to the structural and functional processes of a body of water.

SALINITY
A measure of the quantity of dissolved salts in water.

SALMONID
A fish of the family Salmonidae. Fish in this family include salmon and trout. Most Puget Sound salmonids are anadromous.

SANITARY WASTE WATER
Waste water which includes domestic sewage and may contain pathogens. Sanitary waste water is not sanitary.

SECONDARY TREATMENT
A wastewater treatment method that usually involves the addition of biological treatment to the settling, skimming, and disinfection provided by primary treatment. Secondary treatment may remove up to 90 percent of BOD and significantly more metals and toxic organics than primary treatment.

SEDIMENT
Material suspended in or settling to the bottom of a liquid, such as the sand and mud that make up much of the shorelines and bottom of Puget Sound.

SEPARATED SEWER SYSTEM
A wastewater collection and treatment system where domestic and industrial waste water is separated from storm runoff. A separated system consists of independent sanitary wastewater and stormwater systems. The storm water is generally discharged directly into open water and the sanitary waste water goes to a treatment plant.

SEPTAGE
The sludge and scum material that is pumped out of a septic tank.

SHELLFISH
An aquatic animal, such as a mollusc (clams and snails) or crustacean (crabs and shrimp), having a shell or shell-like exoskeleton.

SHELLFISH CONTAMINATION
The contamination of certain bivalves (clams, mussels, oysters) which filter water to feed and tend to collect or concentrate waterborne contaminants in their tissues.

SHORELINE DEVELOPMENT
As regulated by the Shoreline Management Act (Chapter 90.58 RCW) the construction over water or within a shoreline zone (generally 200 feet landward of the water) of structures such as buildings, piers, bulkheads, and breakwaters, including

environmental alterations such as dredging and filling, or any project which interferes with public navigational rights on the surface waters.

SHORELINE MANAGEMENT ACT (SMA)
The state law (90.58 RCW) that requires local governments to develop a shoreline master program, and requires permits for water and associated land uses. Many local governments promote the protection of wetlands, habitat, and water quality through their shoreline master program.

SLUDGE, WASTEWATER TREATMENT SLUDGE
Semi-solid matter resulting from the treatment of waste water. Some of the contaminants (especially toxic metals) that were in the waste water remain in the sludge after treatment. The treated waste water can be discharged to the Sound, but the sludge must be disposed of elsewhere. Sludge is usually at least partially dried before disposal and if relatively uncontaminated may be added to soil to increase plant growth.

SOLE-SOURCE AQUIFER
The single source of ground water for human use in any one area. Areas with a sole source aquifer have no other source of ground water; any contamination of the aquifer could contaminate the entire water supply.

SOURCE CONTROL
A practice, method or technology that is used to reduce pollution from a source; for example, best management practices or end-of-pipe treatment.

STATE ENVIRONMENTAL POLICY ACT (SEPA)
A state law (Chapter 43.21C RCW) that requires state agencies and local governments to consider environmental factors when making decisions on activities, such as development proposals over a certain size, and comprehensive plans. As part of this process, environmental impacts are documented and opportunities for public comment are provided.

STORM DRAIN
A system of gutters, pipes or ditches used to carry storm water from surrounding lands to streams, lakes or Puget Sound. In practice storm drains carry a variety of substances such as sediments, metals, bacteria, oil and antifreeze which enter the system through runoff, deliberate dumping or spills. This term also refers to the end of the pipe where the storm water is discharged.

STORMWATER
Water that is generated by rainfall and is often routed into drain systems in order to prevent flooding.

SUSPENDED SOLIDS
Organic or inorganic particles that are suspended in and carried by the water. The term includes sand, mud and clay particles as well as solids in waste water.

TAKE
Any attempt to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect individuals of a species listed under the Endangered Species Act, or attempt to engage in such conduct.

TECHNOLOGY-BASED STANDARDS
Technology-based effluent standards are developed by considering the effluent quality that can be achieved using various process or treatment technologies, and the costs of those technologies, rather than basing effluent standards on the environmental effects of different loadings of pollutants.

THREATENED SPECIES
A plant or animal species or subspecies that could become endangered in the forseeable future if appropriate measures are not taken to protect and restore its habitat.

TIMBER/FISH/WILDLIFE AGREEMENT (TFW)
An agreement between timber, fish and wildlife interests that promotes the monitoring and protection of fish and wildlife resources as an integral component of forestry management practices.

TOTAL MAXIMUM DAILY LOAD (TMDL)
The amount of a pollutant a waterway can assimilate without harming beneficial uses. Once a TMDL is determined, it is divided among the existing point and nonpoint sources, with a portion reserved for scientific uncertainty and future growth.

TOTAL SUSPENDED SOLIDS (TSS)
The weight of particles that are suspended in water. Suspended solids in water reduce light penetration in the water column, can clog the gills of fish and invertebrates, and are often associated with toxic contaminants because organics and metals tend to bind to particles.

TOXIC
Poisonous, carcinogenic or otherwise directly harmful to life.

TOXIC SUBSTANCES AND TOXICANTS
Chemical substances such as pesticides, plastics, detergents, chlorine and industrial wastes that are poisonous, carcinogenic or otherwise directly harmful to life.

TREATMENT
Chemical, biological or mechanical procedures applied to an industrial or municipal discharge or to other sources of contamination to remove, reduce or neutralize contaminants.

TURBIDITY
A measure of the amount of material suspended in the water. Increasing the turbidity of the water decreases the amount of light that penetrates the water column. High levels of turbidity are harmful to aquatic life.

UNCONFINED, OPEN-WATER DISPOSAL
Discharge of dredged material into an aquatic environment, usually by discharge at the surface, without restrictions or confinement of the material once it is released.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)
The federal agency which administers many federal environmental laws. EPA Region 10, which includes Puget Sound, is headquartered in Seattle.

UPLAND MANAGEMENT AREA
A mandatory unharvested area for wildlife use and protection in a forest clearcut. These areas typically represent two percent or more of the clearcut area. This term originated from the Timber/Fish/Wildlife Agreement.

VOLATILE
Can be readily vaporized at a relatively low temperature.

WASHINGTON ADMINISTRATIVE CODE (WAC)
Contains all state regulations adopted by state agencies through the rulemaking process. For example, Chapter 173-201 WAC contains water quality standards.

WATER COLUMN
The water in a lake, estuary or ocean which extends from the bottom sediments to the water surface. The water column contains dissolved and particulate matter, and is the habitat for plankton, fish and marine mammals.

WATER QUALITY ACCOUNT *see* **CENTENNIAL CLEAN WATER FUND**

WATER TABLE
The upper surface of ground water or the level below which the soil is saturated with water.

WATERSHED
The geographic region within which water drains into a particular river, stream or body of water. A watershed includes hills, lowlands and the body of water into which the land drains. Watershed boundaries are defined by the ridges of separating watersheds.

WATERSHED PLANNING ACT
The 1998 Watershed Planning Act (Chapter 90.82 RCW) is also called the "2514" process after its bill number (HB2514). The Act provides guidance and funding for watershed plans primarily intended to address water quantity but the planning entities may choose to include water quality and habitat issues.

WELLHEAD
The immediate area around the top of a well. Contamination of the aquifer may occur from surface water if the wellhead is not sealed to prevent flow down the well casing.

WETLANDS
Wetlands are defined in the Addendum of the Marine and Freshwater Habitat Program.

ZONING
Leagal designation of areas of land that are reserved and regulated for different land uses.